

Lifting loops shall be 2, 2"\$-270 ksi strands. as shown. Alternate approved lifting devices are also acceptable.

# € Span-~Outside Beam

COUNTY

MASSAC

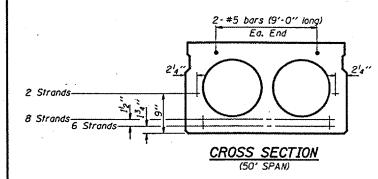
TOTAL SHEET SHEETS NO.

15

CONTRACT NO. 99282

PARTIAL PLAN TRANSVERSE TIE ASSEMBLY

('D'=15°, 20°, 25° and 30°)



NOTE

The std. reinf. and dimensions shown on the 30' span cross section is typical for all spans. except as shown.

### DIMENSION 'C' Skew Angle 'D' 0° 5° 10° 15° 20° 25° 30° Dimension 'C' (Inches) $0 3_8^{\prime} 6_8^{3} 9_8^{5} 13_8^{\prime} 16_4^{3} 20_4^{3}$

after beams have been erected.

END BLOCK DETAILS

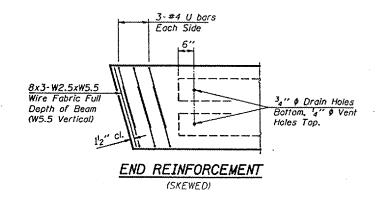
shown above. Loops shall be burned off

Each beam shall have four Lifting Loops. two at each end of beam cast in locations

# \* TRANSVERSE STRAND PLACEMENT GUIDELINES

- Place strands symmetrically about centerline of beam. The minimum distance from center to center of strands in all directions shall be 2".
- The minimum clearance from strand to dowel hole shall be 12".
- 4. The minimum clearance from strand to void shall be  $l_2^{\prime\prime}$ .

Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



MIN. BAR LAP #5 bars = 1'-8"



### DESIGN STRESSES

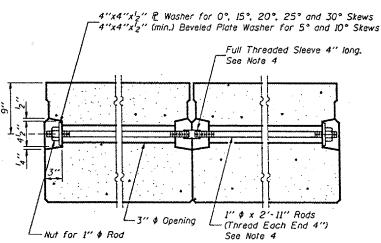
fé = 5.000 p.s.i.

fá = 4.000 p.s.i.

fs = 270,000 p.s.l. (2" # Strand)

fs = 201.960 p.s.i. (2" ♦ Strand)

fy = 60.000 p.s.i.



### SECTION ALONG TRANSVERSE TIE ASSEMBLY (REQUIRED FOR 50' SPAN ONLY)

## **NOTES**

ROUTE

TR 110

SECTION

83-01171-00-BR

PROJECT NO. BR-OS-127(12)

- 1. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- 2. The nominal diameter shall be  $\frac{l_2}{l_2}$  and the nominal cross-sectional area shall be 0.153 square inches.
- 3. Reinforcement bars shall conform to the requirements of IL Modified ASTM A706, Grade 60. 4. On 0°, 5° and 10° skews, alternate appoved transverse tie rods of increased segmental length are acceptable.
- 5. Rail Post anchor devices shall be cast into outside beam as elsewhere specified.
- 6. When a Waterproofing Membrane System is specified, the top surface of the beams shall be screeded with a straightedge and finished with a hand float. The finished surface shall be free of depressions or high spots with sharp corners and the top edge of keys shall be rounded or chamfered a minimum of 14".
- 7. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

DECK BEAMS 21" X 36" TOWNSHIP ROUTE 110

SEVENMILE CREEK SECTION 83-01171-00-BR MASSAC COUNTY

DRAWN SMS CHECKED JSB

DESIGNED JSB CHECKED JFS